NBC NEWS - STS-1 LAUNCH (4-12-1981)

https://www.youtube.com/watch?v=Dhlm3WjwDPI (https://www.youtube.com/watch?v=Dhlm3WjwDPI)

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From Sunday, April 12th 1981 NBC NEWS Coverage of the launch of STS-1, the first Space Shuttle mission. Coverage runs from 6:47 A.M E.T - 7:18 A.M E.T, Launch at 7:00:03 A.M E.T

STS-1 CREW:
Commander: John Young
Pilot: Bob Crippen
(April 12th - April 14th, 1981)

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a message from the president is being read to the astronauts at this moment and we are also told from the white house that president reagan got up at 6 15 eastern time this morning to watch this shot good morning mr president uh we also have roy neal standing by in houston to talk about the mission roy are you there yes i am john and uh at the moment we're standing by here even as you you're going to hear something different in a few minutes too at liftoff uh you'll hear a voice change as launch control at the cape gives way to mission control here in houston hugh harris who's been doing the reporting job from there will be replaced by john mcleach here and neil hutchinson centered in this picture the fella in the blue shirt with the beard that's pushing buttons right now neil hutchinson the flight director and his team will assume control of the entire operation uh hutchinson here has been checking going round the horn is the expression they use and they're getting green lights on all consoles meaning there's nothing to delay the launch as uh mission control in houston hears it and sees it they will actually assume control of the flight at the point where the spacecraft flies beyond the tower the tower is just a limiting factor it has nothing really to do with the tower being there it's just a point in space where that spacecraft is high enough that it's flying to all intents and purposes once in flight the flight director of course takes over and they keep going round and round now the tracking stations out across the atlantic will be reporting back and there's a critical tracking station that we will be listening for here that stations in madrid spain as the spacecraft on that tracking map that you see it on the big tracking map up at the top of your picture top left when the spacecraft flies out over arching over europe on the first orbits at that point the flight director will make the go no go for the crew as they uh are then given the go to at least stay in orbit for a stay and stay in space for a few orbits

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for a few orbits all right i think that's the picture from houston up to this moment let's stand by with you at the cape okay roy thank you uh we feel we have about 45 seconds to go now until the nine minute hold uh is is over and at that point let's talk just a moment about what you'll be hearing uh you will be hearing the voice of hugh harris who will start about 30 seconds from now and the computers will take over this launch at this point at nine minutes and the ground launch sequencer initialization will start and from then on it'll be in the hands of the computers and what you'll be hearing mainly will be the voice of launch control here at the kennedy space center hugh harris we won't do much talking unless we feel that he's getting too complicated so you'll hear the real words about this shuttle launch control at t minus nine minutes and holding we are approximately 26 seconds away from picking up the countdown at the t minus nine minute point nine minutes remaining between now and seven am when we expect to have a lift off of america's first space shuttle uh the launch team has been briefed on the way which a halt can be called to the countdown during the final nine minutes of the countdown and we're coming out we're at t minus nine minutes and counting the launch events are being controlled by the ground launch sequencer now that has been initiated and that will be in control up to t minus 25 seconds when they switch to the onboard redundant set launch sequencer the ground launch sequencer is a part of the launch processing system and operates by relaying commands to the orbiter's onboard computers which then report back to the launch processing system that the commands have been executed the primary job of the computers is to check that all of the launch commit criteria such as propellant loads temperatures pressures and other measurements

[00:04:01 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=241s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=241s)

pressures and other measurements are satisfactory the primary chase aircraft have taken off uh a third t-38 will take off at the t-minus five minute mark the timing of this plane uh is such the tight window that a 15 second delay would mean that they would not be in the proper position at launch the slate t-38 supersonic trainers have such critical timing because of the small fuel load that they carry t-minus seven minutes 52 seconds and counting the voice of hugh harris from launch control approximately 40 seconds away from movement of the orbiter access arm this is the final arm which must be moved out of the way to provide for the orbiter uh to clear the tower properly this may be a very uh interesting launch to watch from the standpoint that the orbiter is able to translate slightly horizontally as it begins to lift off and it also does a roll maneuver which will place it the orbiter sort of on its back as it goes towards the proper inclination to the equator t minus seven minutes seven seconds and counting t minus seven minutes and counting and we have retraction of the orbiter access arm beginning to move back first away from the orbiter and then to swing away this was the walkway attached to the service structure and used by the crew to walk to the orbiter the crew has been advised to lower their helmet visors very slow movement by the orbiter access arm t-minus six minutes 29 seconds and counting the crew is beginning the apu pre-start

[00:06:01 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=361s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=361s)

the crew is beginning the apu pre-start this the start begins at the five-minute point in the countdown t-minus six minutes 15 seconds and counting the apu's are turbine devices fueled by hydrazine which provides hydraulic power to change the angle of the engines and the flight surfaces on the orbiter t-minus five minutes 59 seconds and counting pilot bob crippen had begun that apu pre-start which started about 48 seconds from now the development flight instrumentation which measures the stresses on the orbiter during flight have been turned on and recorders uh store information for playback after landing t-minus five minutes 30 seconds mark and counting pilot bob crippen has signified the auxiliary power units are ready to be started t-minus 5 minutes 15 seconds and counting coming up on the five minute point four three two one mark t minus five minutes and counting we have had a go for apu start apu start is in work this is a start sequence the final chase plane is taken off from patrick air force base t-minus four minutes 42 seconds and counting t minus four minutes thirty seconds and counting once we get the apu start we have a total of 12 minutes of hydrazine supply for running the apu's prior to a liftoff

[00:08:03 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=483s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=483s)

for running the apu's prior to a liftoff everything going very smoothly in this count the apu start is complete t minus four minutes ten seconds and counting as preparation for main engine ignition the main fuel valve heaters have been turned off t-minus three minutes 57 seconds and counting the final helium purge on the shuttle main engine has been started in preparation for engine start the liquid oxygen replenish system has been turned off in preparation for pressurization of the tanks for the launch t-minus three minutes 35 seconds and counting the elevon speed brake and rudder are being moved through a pre-programmed pattern to assure that they'll be ready for use in flight t-minus three minutes 20 seconds and counting the shuttle is now on internal power however the fuel cells are still receiving their fuels from the ground support system for one more additional minute coming up on t minus three minutes t minus three minutes and counting the engine gimbal or movement check is underway to assure they're ready for flight control t minus two minutes 52 seconds the lox valve on the external tank has been closed and pressurization has begun after the tank is pressurized the hold capability is limited to 3 minutes 36 seconds t minus 2 minutes 40 seconds and counting the the fuel cell ground supply of oxygen and hydrogen has been terminated and the vehicle is using its onboard supply t minus two minutes 25 seconds and

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counting t minus two minutes 15 seconds the pressure in the lox tank is at flight pressure coming up on just two minutes away from launch t-minus two minutes mark and counting the liquid hydrogen vent valve has been closed and flight pressurization is underway t-minus one minute fifty seconds and counting chuck cannon has just said smooth sailing baby to astronauts john young and bob crippen t minus one minute 35 seconds and counting t minus one minute twenty seconds and counting we can see the purges of the main engines uh as we prepare for ignition t-minus one minute ten seconds and counting liquid hydrogen tank is at flight pressure t minus one minute mark and counting the firing system for the sound suppression water will be armed just couple seconds from now it has been armed t-minus 45 seconds and counting t minus 40 seconds and counting the development flight instrumentation recorders are on t minus 35 seconds we're just a few seconds away from switching to the redundant sense sequencer t minus 27 seconds we've gone for redundance at sequencer start t minus 20 seconds and counting

[00:12:04 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=724s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=724s)

t minus 15 14 13 t minus ten nine eight seven six five four we've gone for main engine start we have space shuttle and the shuttle has cleared the tower [Music] four thirty four months roger columbia who's houston you're going throttle up five miles

[00:14:04 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=844s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=844s)

roger columbia on the nice ride you're lopping a little bit but you'll probably be slightly higher staging one minute 45 seconds coming up on go no go columbia your negative seats that call up says uh that uh colombia is the altitude is too high for ejection seat use your goal for srb step two minutes four seconds standing by for srb sep uh two minutes twenty seconds confirmed solid rocket booster set take out finishing mark uh two minutes thirty seconds thought on board guidance's converging this program colombia is now steering for his precise window in space for main engine cutoff mark two minutes 40 seconds columbia now 39 nautical miles in altitude 42 nautical miles downrange mark two minutes uh 50 seconds columbia you're looking a little hot all your calls will be a little early columbia now has two engine rotor papers right three minutes young and and really moving out now velocity now reading 6 200 feet per second mark three minutes six columbia now 51 nautical miles in altitude 66 nautical miles downrange velocity now reading 6 500 feet per second it's being powered now by the liquid colombia now 55 nautical miles in altitude 78 nautical miles down range burning that up at a very rapid rate because it's going to be through with

[00:16:00 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=960s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=960s)

because it's going to be through with that about another five minutes right three minutes 40 seconds for our return status check mission control by flight director neil hutchinson columbia governor greene to continue it's uh for those of us three minutes 55 seconds standing by for prestumiko which says colombia should lose one engine stand by preston colombia continues flying forward coming up on negative returns it was a little early that indicates both normal engine performance they're getting all the boosting mark of four minutes eight well they're doing miko as a main engine cutoff is what they're talking about that's right that's right negative return okay negative return music markup can no longer turn around and return to the launch site columbia houston we're showing both olms pc transducers off-scale high mark four minutes uh 45 seconds the flash evaporator is activated on board to cool down low here there's an enormous amount of heat generated there and they've got an evaporator system that has worked long later ago [Music] i believe i heard john say in the cabin that they were off scale low which indicates it's probably a sensor problem due to that launch vibration those are the fuel tank pressures for the orbital maneuvering agents altitude 202 nautical miles downrange velocity now reading 11 000 feet per second a status checking mission controlled by flight director neil hutchinson columbia houston you're go at 5 30 miko 8 plus three four

[00:18:00 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1080s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1080s)

8 plus three four right now mark uh five minutes uh 40 seconds i'd call up from capcom brandon says columbia is projecting navigation and engine performance looks good you're reading you loud and clear okay you're a little weak colombia now 76 nautical miles in altitude 280 nautical miles down the range velocity now reading 13 000 feet per second and you'll be able to hear their voices from bermuda before long from the tracking station there tommy houston i could have the cryo heaters please colombia is capable of an emergency landing at rotor naval air station spain mark 6 minutes 40 seconds columbia pitching over now diving to increase velocity decrease altitude giving colombia her most favorable attitude colombia now 72 nautical miles in altitude 373 nautical miles downrange velocity now reading 16 400 feet per second that's right on the money isn't it joe right on the money and the uh the cut off time single engine call up from capcom brandenstein so a perfect launch and a perfect mission so far so far so good absolutely thrilling you'll see that from the year single engine okay now they can lose two engines and you still get the port says the young encryption can achieve all the insertion even if two engines go out and in about one mark uh the main engine will travel columbia 67 nautical miles in altitude 485 very shortly it will start to throttle back to prevent over stressing

[00:20:00 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1200s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1200s)

throttle back to prevent over stressing the aircraft as the fuel tanks get lighter and lighter mark seven minutes uh 45 seconds should be happening now columbia's main engine's floating back not quite they'll gradually throttle back to maintain three g's a certain [Music] now 63 nautical miles in altitude 606 nautical miles downrange mark 8 minutes 15 seconds columbia now 63 nautical miles in altitude 650 nautical miles downrange standing by now for main engine cut-off now they'll separate from the external tank 20 seconds after cut off that's it right they've got it rates were low and two minutes from cut off they will external uh separation columbia now performing an evasive maneuver now john is under control and as far as we're concerned here on earth it's upside down as at the moment their heads down of course they don't feel that i know that they're weightless now and they're not in orbit yet the external tank is going to re-enter in the indian ocean and break up and that's what the orbiter would do if they don't do that the series of two

[00:22:00 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1320s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1320s)

they don't do that the series of two burns that are that are coming up but they've got three months forty seconds go no go statistics control for the first time external tank will break up over the indian ocean and it has what they call a footprint that is attracted to it'll be about 100 miles long and 60 miles wide they don't expect it to hit on land anywhere that they've pretty well but it left on time i mean it broke away on time so that means it won't hit australia which was the main worry that's right that's right now they're going to have their first orbital burn they're going to turn on the orbital maneuver subsystem moving columbia forward and higher on her flight path placing colombia in orbit these are two little other engines that are in the back of the air of the uh columbia as well and we'll be back checking out all of this everything going extremely well for the columbia space shuttle this is historic first launch going very well indeed we'll have continuing coverage of it all [Music] nbc's coverage of the first space shuttle will continue in a moment a status check in the control center columbia houston we have 40 seconds to los configure los you're looking good burning over the hill we'll see at madrid 42 right now roger

[00:24:20 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1460s)](https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1460s)

shuttle control houston a 12 minute mission elapsed time we've had loss of signal with colombia through bermuda the next station to acquire will be madrid still receiving data however in the control center right at shutdown they saw the right at loss of signal they saw the shutdown of the home all going well with the columbia space shuttle which was launched here this morning just about uh 12 and a half minutes ago coming up in 13 minutes now when it lifted off it weighed four and a half million pounds and it's down to two hundred thousand pounds which is the best quick weight loss diet that i know of i'll tell you get rid of all that fuel in a hurry well it had about seven million pounds of thrust to take it off the spacecraft which is now shorn of its auxiliary fuel tanks uh is uh being listened to by the tracking station in madrid it's that far it went off something like 13 minutes ago and it's being picked up by madrid spain we would like to show you the launch again the video tapes that we've made here uh of the launch that did take place just at seven o'clock this morning precisely on time at textbook launch of the shuttle after a bad day earlier in the week and here it is now nine eight seven six five four we've gone for main

00:26:00 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1560s)

seven six five four we've gone for main engine start we have and the shuttle has cleared the tower never came close to the tower they were a little concerned about that it's turning around i have never seen one of these in the person and i can't tell you i don't want to disappoint you in any way the kind of electronic distance between the television and the thrill of being there to watch it go is considerable made your pants legs flap i'm going to tell you maybe that's what one of the guys said yesterday makes your pants lake climb it's all the fourth of julys you've ever seen rolled into one and that's about as good a description as i know i'll never forget it at about this stage in the launch astronaut crippen who was the first on his first trip into space said what of you what a view and he's just starting to see the great views john will be constantly calling him back from the window to do the job they are now um well they're way out there now they're about 1800 miles i suppose more than that uh probably over 2000 miles downrange heading for the coast of africa is in germany yes they go down over africa and out into the indian ocean they'll uh they'll be picked up by our indian ocean station at uh what is it 40 no it's before 44 minutes about 35 minutes so this is not where they are now uh if you're looking at your screen it's where they were when they launched went off a lot of very very happy people in launch control here it's all after many years of delays and an awful lot of money it's working perfectly nasa as you might expect was very eager to have this happen because they figured that all the criticism of the space

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that all the criticism of the space shuttle the space transport system will begin to diminish considerably once they get off in good shape as they have here today we have some other reaction now to the launch 4.7 feet per second duration of the burn one minute 27 seconds resulting orbit apogee 132 nautical miles per g 57 nautical miles so colombia now in orbit not yet her desirable orbit at the start of olms one columbia was about 400 feet below 150 feet in front and 350 feet north of the eight-year-old tank also columbia weighed four and a half million pounds at launch she now weighs about 214 000 pounds so they're hitting all the markers this is shuttle control houston they're if they're at 132 miles up now in apogee uh they were supposed to be 172 miles no no no no the first one was 16 nautical miles and uh your chart is in statute miles which accounts for the uh yeah the difference the first one was uh as i saw it listed was uh at 130 and 57 targeted for a 130 mile nautical mile circular orbit right right after the second burner and that is 170 statute yeah 130 130 and there is right well then they are on the money right okay bob iselle standing down in the press site and he's with a couple of people who have been here watching all this a couple of californians i think bob true and i must say uh i've been preparing for this thing for months and if it's so overwhelming that i can't even put it into words you think you can be cynical about things but the emotion of this our miami bureau chief don brown was sitting next to me tears were coming down his eyes and he's a pretty tough guy we have with me two guys steve spielberg the film filmmaker governor jerry brown of california what did you governor what did you think it was just great just watching that thing just take off it made me feel like we got a lot of strength in this country

00:30:00 (https://www.youtube.com/watch?v=Dhlm3WjwDPI&t=1800s)

got a lot of strength in this country and and i hope we take some uh heart from that and start expanding our commitment to space it's real important for our spirit as well as our economy mr spielberg what did you think when you saw it well it sort of puts everything that we do in movies in in quick diminishing perspective uh it was a remarkable experience it was a remarkable experience i think it was for everybody out here thank you very much and john everything going well the spaceship is on its way and we'll be back with more coverage after this

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